

Kindly amend claims 1-4, 10-20 and 24-31 as follows:

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1. (Amended) A semiconductor device comprising: a plurality of thin film resistors connected in series to form a bleeder resistance circuit, each of the thin film resistors being made of a polysilicon film doped with B or BF₂ P-type impurities and having two end portions each having a high impurity concentration region; a first insulating film overlying the thin film resistors; a plurality of first conductors connected to the ends of the thin film resistors for connecting the thin film resistors in series; and a plurality of second conductors each connected to a respective one of the first conductors and overlying a respective one of the thin film resistors through the first insulating film.

2. (Amended) A semiconductor device according to claim 1; further comprising a second insulating film overlying the thin film resistors; wherein the second conductors are formed on the second insulating film in a position over the thin film resistors so that the thin film resistors are at the same potential as the second conductors.

3. (Amended) A semiconductor device according to claim 1; wherein each of the first conductors is at the same potential as a respective one of the thin film resistors.

4. (Amended) A semiconductor device according to claim 2; wherein each of the second conductors is at the same potential as a respective one of the thin film resistors.

10. (Amended) A semiconductor device according to claim 1; wherein the film thickness of each of the thin film resistors is several tens to 2000 angstroms.

11. (Amended) A semiconductor device according to claim 1; wherein the film thickness of each of the thin film resistors is several tens to 1000 angstroms.

12. (Amended) A semiconductor device according to claim 1; wherein the first conductors are composed of well regions formed in a silicon substrate.

13. (Amended) A semiconductor device to claim 1; wherein the first conductors are made of polysilicon.

14. (Amended) A semiconductor device according to claim 1; wherein the second conductors are made of polysilicon.

15. (Amended) A semiconductor device according to claim 1; wherein the second conductors are made of aluminum.

16. (Amended) A semiconductor device according to claim 1; wherein the second conductors are made from a lamination film of a barrier metal and a silicide film.

17. (Amended) A semiconductor device according to claim 1; wherein the first conductors are made of a material forming a gate electrode of a MOS transistor formed on the same chip as the thin film transistors.

18. (Amended) A semiconductor device according to claim 1; wherein potentials of each of the plurality of thin film resistors and the first conductors connected to them are fixed by a metal wiring material through a common contact hole.

19. (Amended) A semiconductor device according to claim 1; further comprising a MOS transistor having a gate electrode; and wherein a film thickness of each of the thin film resistors is formed thinner than a film thickness of the gate electrode of the MOS transistor.

20. (Amended) A semiconductor device according to claim 19; wherein the film thickness of the thin film resistors is several tens to 1000 angstroms.

24. (Amended) A semiconductor device according to claim 19; wherein a temperature dependency of the resistance value of the thin film resistors is -4000 ppm/°C or lower.

25. (Amended) A semiconductor device according to claim 1; wherein each of the thin film resistors has a low resistance region having the high impurity concentration for

connecting with metal wiring, and a high resistance region; and wherein a film thickness of the high resistance region is smaller than that of the low resistance region.

26. (Amended) A semiconductor device according to claim 25; wherein the film thickness of the high resistance region is several tens to 1000 angstroms and the film thickness of the low resistance region is 2000 to 10000 angstroms.

27. (Amended) A semiconductor device according to claim 25; wherein the low resistance region and the high resistance region of the thin film resistors are formed on a common flat surface.

28. (Amended) A semiconductor device according to claim 25; wherein upper surfaces of the low resistance region and the high resistance region of the thin film resistors form the same flat surface.

29. (Amended) A semiconductor device according to claim 2; wherein the first insulating film and the second insulating film are made of a silicon oxide films.

30. (Amended) A semiconductor device according to claim 2; wherein one or both of the first insulating film and the second insulating film are made of a multilayer film containing a silicon nitride film.

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end

31. (Amended) A semiconductor device according to claim 1; wherein a resistance value of the entire bleeder resistance circuit using the plurality of thin film resistors is 1 mega-ohm to 100 mega-ohms.

Kindly add the following new claims 34-36:

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34. A semiconductor device comprising:
a plurality of first conductors;
a first insulating film overlying the first conductors;
a plurality of thin film resistors overlying the first insulating film, each of the thin film resistors being made of a polysilicon film doped with B or BF₂ P-type impurities and overlying a respective one of the first conductors;
first conductors for electrically connecting the thin film resistors in series; and
first connecting means for electrically connecting each of the first conductors to the end of a respective one of the thin film resistors so that each of the first conductors is at the same potential as the respective one of the thin film resistors.

35. A semiconductor device according to claim 34; wherein each of the thin film resistors has two ends, the thin film resistors being spaced from one another along a line and the two ends of each of the resistors being spaced apart along the line.

36. A semiconductor device according to claim 35; further comprising a second insulating film overlying the plurality of thin film resistors; a plurality of second conductors formed on the second insulating film and each overlying a respective one of the thin film resistors; and second connecting means conductively connecting one end of each the thin film resistors to a respective one of the second conductors so that each of the thin film resistors is at the same potential as the respective one of the second conductors.

IN THE ABSTRACT:

Delete the abstract now of record and insert therefor the new abstract submitted herewith on a separate sheet.

ADDITIONAL FEES:

No additional fees are believed required; however, should it be determined that a fee is due, authorization is hereby given to charge any such fee to our Deposit Account No. 01-0268.

REMARKS

In the last Office Action, the Examiner withdrew claims 32-33 from further consideration as being directed to a non-elected invention. Claims 1-7, 10-15, 17-21 and 24-31 were rejected under 35 U.S.C. §103(a) as being unpatentable over